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Equity in Utilization of Inpatient forNational Health Insurance (JKN) Program in Indonesia

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Abstract

Indonesia is targeting to achieve Universal Health Coverage (UHC) in 2019. Currently, the National Health Insurance program (JKN) has been running since it was first started at January 1, 2014 and includes as many as 171 million participants from 254 million targeted population of Indonesia as efforts in achieving UHC. Objective: The aim of this study was to evaluate the effect of JKN against the equity in the utilization of inpatient care in thegovernment hospital (RS) and private hospitals before the implementation of JKN in 2013 and one year after JKN implemented in 2015 into 4 main groups: health insurance, geographic (rural and urban), income per capita, and education groups. This study used mixed method data collection techniques by using quantitative data obtained from secondary data of the National Socioeconomic Survey (Susenas) 2013 and 2015, and BPJS (Social Security Agency) of Health 2014-2015. The qualitative data obtained from the study of literature (desk review). Data analysis was performed by considering the percentage, delta, ratio, and odds ratio of utilization of inpatient care in government and private hospitals. Based on the analysis of the fourgroups studied, showed that the JKN program improve equity and increase public access to the utilization of inpatient both at the Government and Private Hospital especially for the JKN participants, ruralpopulation, lowest income groups and less educated group.

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Health insurance membershipp group: more patients using health services use health insurance both in government and at private hospitals, but the number of JKN card owner is the highest in government hospital. Conversely, those with private insurance use more health services in private hospitals. Geographic groups (rural and urban): JKN increase greater equity for rural people than urban communities. The increase in the highest access especially in utilization of health services in private hospitals. The access for rural communities in private hospitals increase for about 127% compared to the urban population that only increased by 47%.

Groups of per capita income: increase in access is highest in quintile 1 compared with quintile 5. In the government hospital, the increase in access to health service of the poor is about 97% compared with the rich that only about 25%. While in private hospitals, the access increasesfor the low income group occurs by 336% compared with the rich, which increased only 20%. Education groups: JKN used by all education groups either higher education or lower education to health services at government and private hospitals. The increase in access impacts primarily to the low education group (<=elementary school). Results of this study showed that the increase of equity for JKN card members in inpatient utilization especially impact at the Government Hospital. JKN program also increase the equity of rural communities in accessing inpatient care at government hospitals and private hospitals. Group of the lowest income also acquire equity improvements in inpatient utilization. Additionally, the program also includes the entire community both for high and low education group, however improvement of equity mainly impacts the low education group.

Keywords: JKN; UHC; equity; inpatient utilization.

I. Introduction

Indonesia economy has been developed through a remarkable transformation in the last fifteen years. Data released by the World Bank in 2015 showed that the average economic growth of Indonesia persists in a number of around 6 percent in the last decade. Indonesia is also a member of the G-20, the only one of Southeast Asia. Economic growth also helped create a middle class that is more powerful than ever before. Currently there are 45 million people (18 percent) of the richest of all Indonesian people who are economically well established and enjoy a higher quality of life. They are a segment of the population the fastest growing, with an increase of 10 percent per year since 2002 [1].

However, groups of people in Indonesia who are left financially secure 205 million remaining behind. The journey to social justice in the form of shared prosperity is still not finished. Indonesia risk cannot help the poor and vulnerable because of poverty began to stagnate. In 2007 the poverty rate of 16:50% (37.17 million) and decreased until 2014 to 10.9% (27.73 million) and in 2015 rose to 11.5% (28.51 million) [2]. Gini ratio increased from 30 (in 2000) to 41 (2014) which is the highest figure ever recorded, meaning that inequality in Indonesia increased considerably. In 2002, 10 percent of Indonesia's richest consume as much as the total consumption of the poorest 42 per cent, whereas in 2014 this figure increased to 54 percent of the poorest. About 10% of Indonesia's richest man for almost 77 percent of all the wealth in this country. Even one percent (1%) of the richest people have 50.3% of all the wealth. This condition puts Indonesia at the second highest position after Russia and Thailand of the 38 countries whose share of total wealth controlled by the richest 1%

of households [1]. This means that income from financial and physical assets enjoyed by fewer households in Indonesia than in many other countries. Based on the above data, it was concluded that inequality in Indonesia has reached a very high level, the resources for the poor divided very little. If inequality is not addressed and allowed to develop it can lead to serious consequences, namely economic growth and poverty reduction is slowing and increasing the risk of conflict [1]. One of the main drivers of inequality are poor children often do not have the chance of a fair start in life, thus reducing their ability to succeed in the future. Poverty causes pain, pain causing death. To that required intervention in the policy for the poor through social security for the community in the form of health insurance.

The high socio-economic inequality in various fields in Indonesia, which is measured through the Gini index with a value of 0:41, is not inevitable. Policymakers could reduce it by addressing inequalities caused by factors beyond the control of individuals. To take such action requires a better understanding of why inequality is increasing, why this issue is important and what can be done. The initial step in the health sector is the improvement of public health services in the area so as to allow the start of the same on the entire society. Development in the health sector has been announced by the Government through JKN program aimed at achieving UHC in 2019. Although premiums of about 104 million people in Indonesia, mostly the poor and vulnerable, has been borne by the Government. However, there are still many people who although not living under the line of vulnerability, the economy will be greatly affected if subjected to shocks (natural disasters, epidemics, social, political and economic) due to such shocks would erode its ability to make money and save, and invest in health and education. In the period that has been long, they have experienced life up and down the slopes. They mostly work in the informal sector do not pay premiums JKN, and also not covered by PBI (Recipient Contribution). Efforts to reach households of this kind will be the most important step in achieving UHC. But there is a big challenge, namely the Indonesian population database system that has not been tidy and most residents of informal work sector. It is recognized that if UHC coverage are met, not enough to provide protection against health shocks when not provided quality health care for everyone.

Achievement of UHC becomes health challenges in Indonesia. It can be seen from the problems faced by Indonesian gaps in health. Ministry of Health (2013) stated that Indonesia still faces problems still lack of public access to quality health care facilities are characterized by the low status of maternal and child health and nutritional status of the community; not optimal disease control measures are characterized by high morbidity and mortality due to communicable diseases and non-communicable diseases; as well as the low quality of environmental health; still low professionalism and equitable utilization of health personnel especially in DTPK (Disadvantaged Areas Border Islands) and DBK (Regional Health Problem); and the low availability, equity, affordability, security, efficacy / benefit, the quality of medicines and food, medical devices as well as the competitiveness of domestic products [3]. In addition, the National Health System (NHS) has not been properly socialized in these areas so that the area does not make Regional Health System (SKD), which refers to the Presidential Decree (Decree) number 72 of 2012. Consequently, curative services are more prominent than preventive promotive services, and SKN and SKD sync. Therefore, there are constraints in responding to current issues and identify future challenges including the achievement of UHC-promotive and preventive efforts. Most of the increase in the health budget proposed for 2016 is intended for the national health insurance system (National Health Insurance or JKN) are inclined towards to the major hospitals in big cities and favorable

household more established, whereas the reach of the budget increase in primary health care will be more pro-poor.To provide social security, including health, overall, the state developed the National Social Security System (Navigation) for all people through the establishment of Law No. 40 of 2004 on the Social Security. Then, every resident shall become a participant of the Social Security (Article 14 of the Law No. 24 of 2011 on Social Security Agency or BPJS). Implementation BPJS Health on January 1, 2014 reflects that the government has given the assurance of protection and social welfare for all citizens. With the BPJS health, health security management become integrated in BPJS nationally. Through the presence of BPJS Health, is expected to support health development and equity standpoint in Indonesia to achieve UHC.

The concept of equity is the fair distribution of resources and equitable. An area is said to have high levels of equity and equitable access if the (geographic and financial) health services easily accessible to all levels of society, has the health facilities and Human Resources for Health (SDMK) evenly distributed. Related to basic health services, improving the accessibility and quality of services remains a challenge especially for people who are in the category of Disadvantaged Regions Border Islands (DTPK) where there are currently around 183 districts out of a total of 511 districts / cities in Indonesia, including in the category DTPK with service health centers and community health clinic that is far below the national standard. The high levels of pain arising from environmental conditions due to the limited options available can be categorized as inequality or inequity.

Inequity, or commonly referred to inequality is a phenomenon that involves the social dimension and social justice. Social inequality that occurred in the community can affect the level of health in these communities. This disparity includes the systematic differences of the health status of certain groups of people who are affected by social and economic status of these groups.

The fundamental characteristics of inequity or social inequality in health are systematic, can be prevented, and unfair / unjust or unfair. Whitehead and Dahlgren further explain in more detail about the characteristics of social inequality in health as follows: Health inequality does not appear random, but there is a consistent pattern between populations.

One example is the most basic differences in mortality and morbidity rates are inversely proportional to the level of socio-economic position in society. The next characteristic is that it can be prevented or modified. An example is the infant mortality rate has doubled in poor families compared to babies born on or wealthy families can afford. The third characteristic is about justice. The fundamental concept of the DIMA

2. Materials and Methods

This study usemixed method data collection techniques by analyzing quantitative data on secondary data from Susenas (National Social Economic Survey) 2013 and 2015, and BPJS of Health 2014-2015, while the qualitative data obtained by performing a literature study (desk review). Data analysis was performed by considering the percentage, delta, ratio, and odds ratio of utilization of inpatient care in government hospitals and private hospitals.

Susenas or National Social Economic Survey is a household survey on the various socio-economic

characteristics of the population, particularly those relating to the measurement of the level of social welfare. Characteristics of information/ fields collected include the areas of population, health, education, family planning, housing, as well as household consumption and expenditure.

Susenas designed into three modules, namely (1) the consumption module / household expenses, (2) module of social, cultural, and education, and (3) the module housing and health [4].

3. Results and Discussion

3.1. Health InsuranceGroup

In the Government hospital, the percentage of utilization for JKN members increased significantly (1.68% in 2013 to 2:39% in 2015, p = 0.0001), while the percentage of owners of other insurance (private insurance) decreased in utilization significantly (1.89% in 2013 to 0.81% in 2015, p = 0.0001).

But in private hospitals, the percentage of utilization JKN members and private insurance members are both experienced a significant increase from 2013 to 2015.

The value of JKN members are increase from 1.07% in 2013 to 1.57% in 2015 (p=0.0001) and private insurance increase from 1.71% in 2013 to 4.58% in 2015(p=0.0001).The data shows in Figure 3.1.

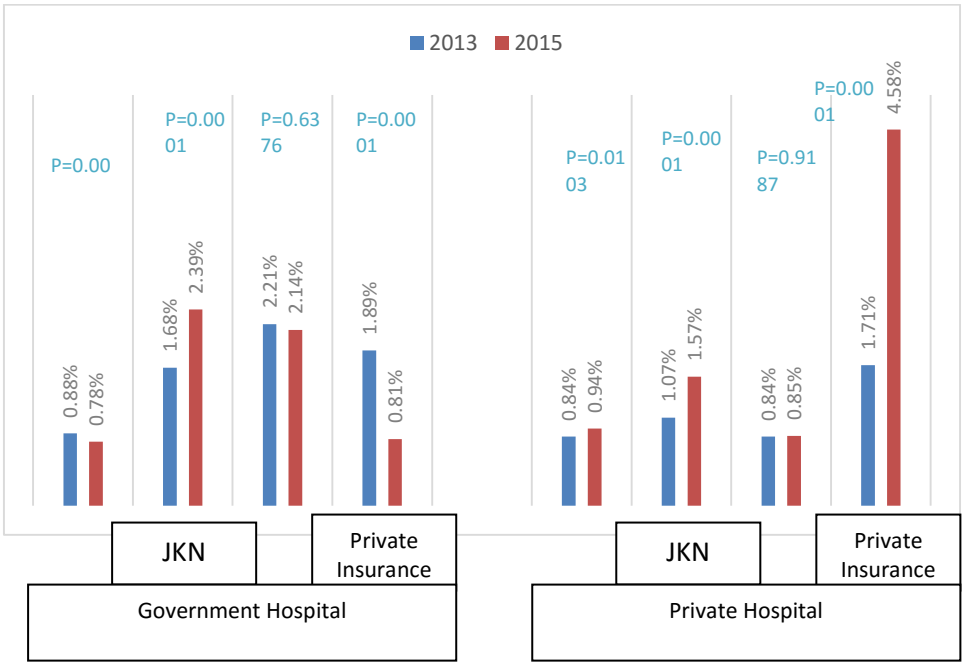

Figure 3.1: Utilization Percentage of Inpatient Health Insurance Ownership According to the Government and Private Hospitals in 2013 and 2015 [5]

Tabel 1: Delta, Rasio, and Odds Rasio Value of Inpatient Utilization Health Insurance Membership Group in Government and Private Hospitals in 2013 and 2015

Value	**JKN**	
	Government hospital	**Private hospital**
Delta	0.42	0.47
Rasio	25%	44%
Odds Rasio	2.820	1.538

The rate of utilization (delta value) in the private hospital for JKN members (delta 0:47) higher than the JKN membersin the Government hospital (delta 0.42). This picture is in line with the value of the ratio that indicates the ownership of JKN on private hospitals is 44%, higher than the ratio of owner JKN in Government hospital, which only increased by 25%. Value of ratio signifies that membership of JKN card open people's access to health services. The increase access for the owner is especially high for JKN members that use health service in private hospitals. Meanwhile, the value of the odds ratio represents the probability is highest for JKN ownership in government hospitals (odds ratio 2.820) compared with JKN ownership in private hospitals (odds ratio 1.538). This indicates that it is likely to get inpatient care at government hospitals for JKN member is higher and prefferedcompared with inpatient services at private hospitals.

Based on the percentage parameter, delta value, ratio value, and odds ratios, it can be concluded that the increase of equity for JKN card owners can open the access for public in using the health service both in the Government and Private Hospitals.Increased participation percentage of JKN in Bappenas report showing that about 8.8 million the participants of JKN were The Beneficiaries Recipient (PBI) that was covered by the government in December 2014. This amount is derived from the integration of approximately 180 Jamkesdafrom district/city from about total of 460 Jamkesda from districts/cities in Indonesia[5]. Thus, there are 280 Jamkesda or around 36.2 million people who need to be integrated into JKN. Until 2015, the number of integration of Jamkesda membership has reached 11.5 million people [6]. However, several obstacles still encountered in the implementation of JKN derived from the integration ofJamkesda. Jamkesda is a health insurance program funded by the local government both from the provincial government or the government of district/city. Therefore, the draft Jamkesda program varies depending on the willingness and ability of each fiscal area. This has led to the fulfillment of rights of the population will be insured via Jamkesda be non-uniform [5]. Local Government involvement is needed in integrating JKN Jamkesda into the scheme. In addition, the Government has a major role in the implementation of programs relating to the payment of costs that are not borne by the central government, facilitating the population not yet covered, as well as ensuring the availability of facilities at a level below its shade [7].

In addition to integration issues of Jamkesda, JKN program also faces many challenges relating to the amount of participation. Percentage of membership JKN in 2016 known as follows: Askes PNS 7%; Military / Police 1%;

Jamsostek 3%; Jamkesda 18%; Corporate Guarantee 7%; Private insurance 1%; Jamkesmas 35%, while there are still 28% of the population without any health insurance [5]. Challenges for expansion of membership in this group become the greatest challenge. Because most people who are not registered in this JKN comes from people working in the informal sector are included in the group Participants Not Receiver Wages (PBPU). Meanwhile, 63% or 104 million poor and vulnerable are covered by the government in terms of payment of dues participants as a group Beneficiaries Recipient (PBI) [6]. In contrast to the group of PBI, population groups PBPU a resident who does not fall into the category of beneficiaries, but is not expected to have a desire to register and pay the fee due to various factors [8]. WHO noted that half of the working population in the world, or about 1:53 billion people were employed in the informal sector which is vulnerable [9]. These workers predicted have no formal employment contract and do not receive social security and health [10]. In 2014, the enthusiasm of people who fall into the category of PBPU is very high. As an illustration, in the province of West Java and Banten province PBPU expansion of membership has reached 1,915% and 547% [5]. But this enthusiasm is not always positive impact on JKN program. This is because of PBPU participants who register are participants who are sick so that the risk of adverse selection becomes very high. Also found significant adverse selection occurs in the prevalence of chronic diseases of insured people in Vietnam [11]. The phenomenon of adverse selection occurs because individuals in registering the selection based on disease risk factors in the near future. This has caused some losses such as loss of efficiency of treatment that do not fit on the registrant, the risk of loss sharing, as well as losses on the collateral giver. WHO noted that approximately 150 million people pay for catastrophic health costs caused by direct payments as user fees medical services, and 100 million are below the poverty line [12].PBPU participants have the flexibility to choose the desired treatment classes in accordance with the desire and capability of each. It is an attraction for the private hospital because PBPU group was able to finance the extra cost. Characteristics election PBPU treatment classes differ from region Jamkesda number of partial coverage with a coverage area of Jamkesda cover the entire population. Of Bali held Jamkesda program for the entire population are not covered by a health insurance equivalent grade III. In this regard, the majority (57%) of participants PBPU derived from population groups that are better able to care class is the most preferred is the class I. Whereas, in the province of North Maluku Jamkesda where the coverage is still minimal, nursing class most selected by participants PBPU is class III (51%). In addition there are indications of adverse selection, compliance dues PBPU participants also become a serious problem. Until the end of 2014, the level of participants' contributions from PBPU showed collectability rate at only 71.54% (National Team to Accelerate Poverty, 2015). The farther from the time of registration, payment compliance of the participants in this group decreased. Thus, it is neededto create a strategy to facilitate the participants of PBPU togive their payment of dues and giving a warning to the participants in arrears as a consequence of participants who do not comply with dues payments. It is necessary to maintain financial sustainability JKN to run properly.

3.2. Geographic Group (Rural and Urban)

The percentage of utilization of inpatient care in rural and urban areas increased significantly from 2013 to 2015 both in the Government Hospital and Private Hospital ($p = 0.0001$). Utilization percentage of urban population is higher than rural communities on both types of hospitals studied (RS Government:urban 1.68%,rural 1.39%. RS Private:urban 1.67%, rural 0.84%). Data percentage attached in Figure 3.2.

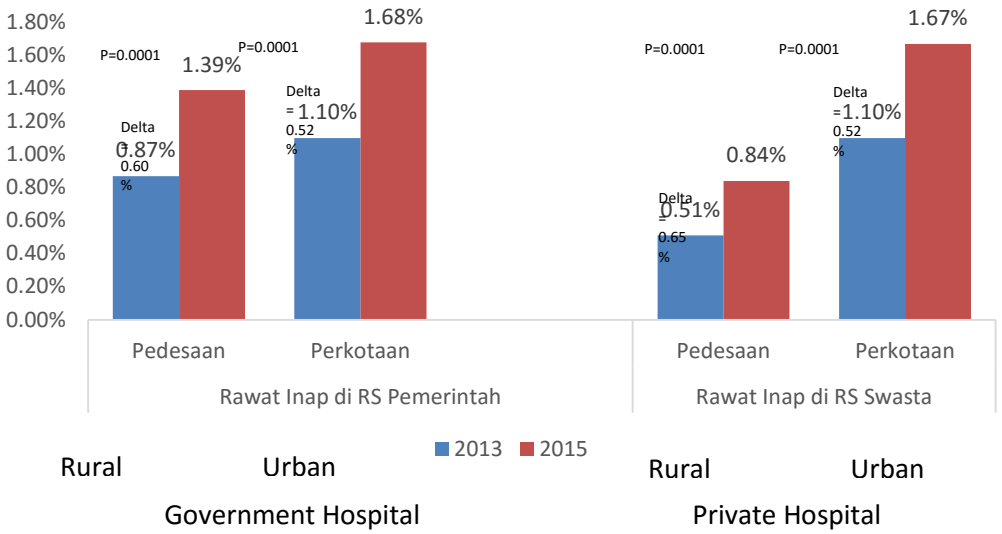

Figure 3.2: Percentageof Utilization of Inpatient According to Geographic Group (Rural and Urban) at Government Hospitals and Private Hospitals in 2013 and 2015 [5].

Meanwhile, if the review is based on the value of delta and ratio, rural communities have a delta value and a higher ratio compared to urban communities both on government RS and Private Hospitals. The calculation of the value of delta describes the utilization rate is highest in rural communities compared with urban areas in both types of the hospital. So is the value ratio which describes increment higher access are those of rural than urban areas. The increase in access is particularly high in rural communities who use inpatient services at private hospitals with a ratio of 127%. This illustrates that JKN open wider access for rural people to obtain health care equity. Meanwhile, based on the reviews of the odds ratio, the highest value found in urban communities compared to rural communities on both types of hospitals studied. This illustrates that the probability of utilization is still dominated by urban communities than rural communities. Delta value, ratio, and odds ratios attached in Table2.

Table 2: Delta Value, Ratio, and Odds Ratio Inpatient Utilization Geographic Group (Villages and Towns) in Government and PrivateHospitals in 2013 and 2015

Value	**Government hospital**		**Private hospital**	
	Rural	**Urban**	**Rural**	**Urban**
Delta	0.60	0.53	0.65	0.52
Rasio	69%	48%	127%	47%
Odds Rasio	0.0	1.109	0.0	1.233

Based on the parameters mentioned above, the percentage, delta value, the value ratio, and odds ratios, it can be concluded that increasing the equity occurred in rural communities with open access in the use of health services

both in the RS Government and Private Hospitals.

JKN program's success in achieving equity for rural communities can be achieved, supported by several factors, one of them by organizing dissemination programs conducted by BPJS. However, socialization runs still not optimal because it involves little new relevant agencies, namely the sub-district officers and village officials or village officials, not to involve the grassroots level [8].

So that people do not understand about BPJS, including mechanisms of health care through the program JKN. It required the cooperation and coordination between the organizers BPJS liaison with relevant agencies such as the Department of Health, Health Center, Social Services in connection with implementation BPJS Nakertrans health through the program as JKN especially for the poor.

The review is conducted on data Susenas a decade ago showed the geographical problem still faced by JKN today. Suryadarma and his colleagues explained that the rural communities, especially outside Java and Bali and eastern Indonesia have very limited access to education and health facilities. These limitations included in the aspect of cost and mileage.

It can be concluded that this group of people has the disparity in access to health services [13]. In less developed countries still encountered obstacles that services are not utilized properly due to some existing resources are still concentrated in large cities, and do not reach the poor. Utilization differences between village / town is influenced among other things by the available resources as well as the differences in expectations to health services expected by the public in the region [14]. In addition, the accessibility factor also affects the utilization of medical services in some developing countries. Other consideration includes access such as distance to obstacles encountered on the utilization of health services, especially for rural communities [15].

In developed countries, despite the rural location determines the availability and level of access to health care, but this does not always have an impact on inequality of health outcomes. Geographical diversity village / town is more influential in shaping the impact on socioeconomic inequality, ethnicity, availability of public services is more limited, and limited transportation and employment opportunities.

In contrast to previous studies, our study is known that JKN have improved conditions become obstacles in the utilization of existing health services, especially in the utilization of inpatient care in hospitals. Program JKN improve equity by increasing the access and utilization rate of more reach people in rural areas.

3.3 Income per Capita Group

Inpatient utilization percentage increased significantly from 2013 to 2015 in all income groups both in government hospitals and at private hospitals ($p = 0.00001$).

The 5th quintile group (20% richest) is a group with the highest percentage of utilization at both types of hospitals studied, while quintile 1 (the poorest 20%) is a group with the lowest percentage of utilization. The values of each category are presented in Figure 3.3 and Figure 3.4.

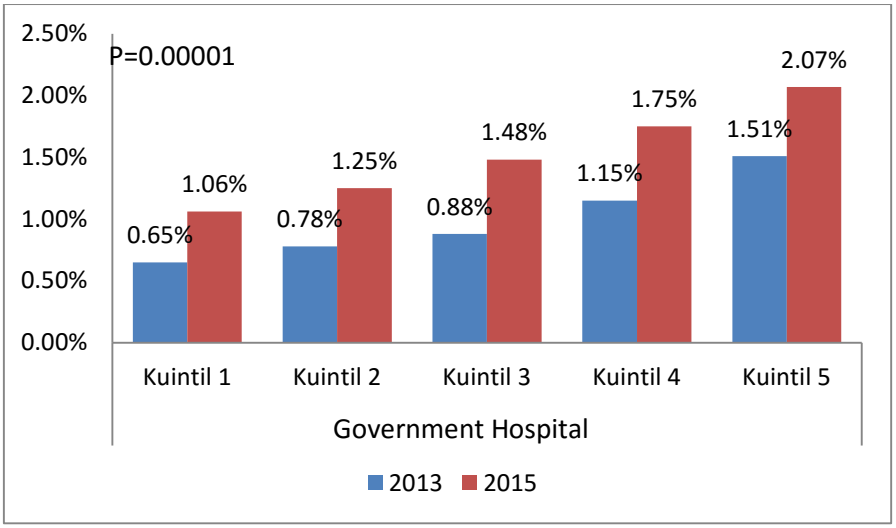

Figure 3.3: Percent Utilization of Inpatient by Group Consumption Expenditure per Capita in the RS Government in 2013 and 2015 (data from Susenas 2013 and 2015)

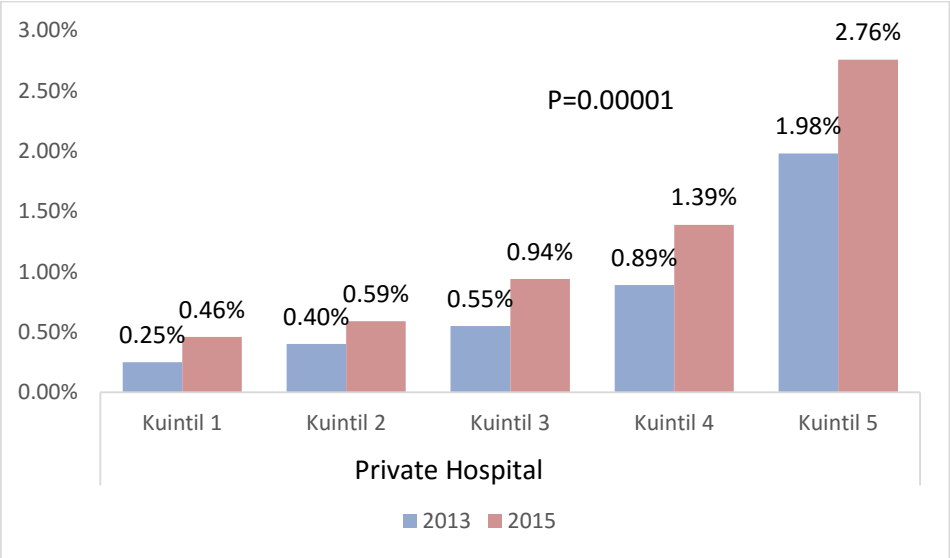

Figure 3.4: Percent Utilization of Inpatient by Group Consumption Expenditure per Capita in private hospitals in 2013 and 2015 (data from Susenas 2013 and 2015)

If the review is based on the value of delta, delta values in quintile 1 higher than the delta in quintile 5 both in government hospitals and at private hospitals. Delta value describes the utilization rate of the poor is higher than the rich group at both hospitals studied. The rate of utilization of poor people is highest in private hospitals with a delta value of 0.84.

Based on the reviews the value of the ratio, the ratio of the highest known value contained in the first quintile and the lowest ratio in quintile 5 of the two types of hospitals studied. Picture ratio value indicates a higher increase in access among poor communities. In the RS Government, the increase in access in quintile 5 (the wealthiest 20%) occurred only at 25%, while the increase in access to utilization in quintile 1 (the poorest 20%)

is much higher at 97%. The increase access of the poor in private hospitals and even show a higher rate that is equal to 336%, far higher than the increase of access to the rich who just happened by 20%. These figures show that JKN have improved access to the poor than the rich both in government hospitals and at private hospitals. Delta value, and ratio of each category is attached in Table 3.

Table 3: Value Delta and Inpatient Utilization Ratio Consumption Expenditure per Capita Group in Government Hospital Private Hospital in 2013 and 2015

Value	Government hospital					Private Hospital				
	K1	K2	K3	K4	K5	K1	K2	K3	K4	K5
Delta	0.63	0.60	0.68	0.52	0.37	0.84	0.48	0.71	0.56	0.39
Rasio	97 %	77 %	77 %	45 %	25 %	336 %	119 %	129 %	63%	20%

From the analysis of per capita income based on a percentage parameter, delta value and the ratio value, it can be concluded that JKN improve access especially for the poor (income quintile 1) in both the RS Government and Private Hospitals. Thus, JKN be a potential to achieve equity for the poor and marginalized. The poor marginalized groups often experience health care offense against their dignity, for example, discrimination on health care [5]. The poor in Indonesia set up as participant receiving tuition assistance (PBI) which contributions are usually paid by the Government. Although it's been a lot of poor people who registered for the PBI, but the utilization of health care services running optimally for a few groups that have not received the card and socialization utilization JKN who has not run optimally [8]. Other issues were also very highlight public concern is the lack of satisfaction of participants JKN due to the limited number of health care facilities and infrastructure, the difficulty of accessing health services, the difficulty of the administrative requirements to obtain health care, and still their dues additional costs that must be paid participants. JKN participant satisfaction level of the poor found higher than the richest group. This is because the rich have a standard of health care demands a higher [16]. JKN related regulations are now minimizing the chances of a cost-sharing. However, some cases are still found their extra cost by the health facilities, especially in health care facilities Advanced (FKRTL). According to a survey conducted by Minnara Sejahtera Raya note that 18.5% of participants JKN pay an additional fee (n = 200, ME = 6.9%). Additional charges are mentioned in the survey are costs that are not allowed by law in the provision JKN. Some studies show a strong association between lifestyle standards relating to revenue by utilization of health services. Percentage of children with better health status is higher in families with high levels of family income [17]. Higher income groups, more use of private insurance and have easier access to health care, otherwise poor communities largely rely on public insurance with limited access [18]. However, the phenomenon in some state of the United States showed that patients from lower income groups consume more health care than people with high incomes [19]. This phenomenon had happened for 20 years in the US. Prior to 1980, the poorest income groups have health care utilization value lower. However, in 1987-2001, low-income groups have started to increase utilization of health services by 78%, much higher than the utilization of the richest group that just happened by 34%. There are 20 fold

diference between the richest women in the group who gave birth with the help of professionals compared with women in the poor [10]. Some studies show that people living in developing countries have lower access to health services compared to developed countries. In some countries in the African region known that the poor less likely to report the incidence of the disease for some people consider the disease as a normal occurrence that does not require special handling. Thus, interventions to address the problem of inequality in the rich and poor in 49 developing countries could save more than 700,000 women in 2011 to 2015 [20]. This relates to the access and the cost of health care is needed. Thus, referring to the amount of evidence that has been mentioned that the level of income related to unequal access to health care, the government through the program JKN strive for this kind of inequality can be overcome. Constitution of 1945 section 28 H and Law No. 23/1992 on Health, provides that everyone is entitled to health services. Therefore every individual, family and community right to receive the protection of health and the state has the responsibility to be fulfilled right set of healthy living for its population, including the poor and cannot afford [7]. Efforts to correct this imbalance is reflected in the program objectives JKN is to improve access and quality of health services to all the poor and not able to achieve an optimal degree of public health effectively and efficiently. This goal has been achieved significant progress in achieving equity with increased access and utilization rates are higher for the poor than the rich group depicted in our research.

3.4 Education Group

Inpatient utilization percentage based on the educational background increased significantly (p = 0.0001) from 2013 to 2015 both the RS Government and Private Hospitals. The highest percentage of utilization showed for those of Diploma-PT on both types of hospitals studied. While the percentage was lowest for the group of junior-high school for the RS Government and the group <= SD to the private hospital. The increase in the percentage may be an indicator of the increasing number of people who use the health service. The value of each group is listed in Figure 3.5.

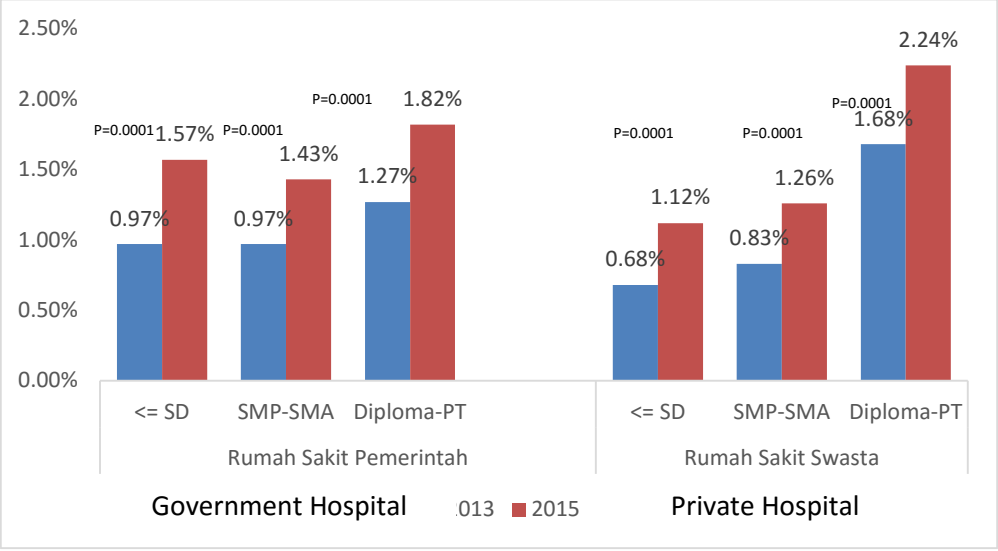

Figure 3.5: Percent Utilization of Inpatient According to the Education Group at government hospitals and private hospitals in 2013 and 2015 (data from Susenas 2013 and 2015)

If evaluated based on the value of delta and ratio, it is known that the delta value and the highest ratio found in the group <= SD on both types of hospitals studied, while the lowest values are those of Diploma-PT. Delta value describes the utilization rate is highest in the low education group (<= SD) on both types of hospitals studied. The highest rate of utilization especially in the educational group <= SD in private hospitals (delta value of 0.65) compared with other educational groups. Similarly, the ratio value that describes the increase in access to higher education for low (<= SD) in both the RS Government and the Private Hospitals. However, the increase in access to the low education group at the private hospital the highest compared with the other groups to value ratio reaches 95%. Overview delta value and the ratio of each group is presented in Table4.

Table 4: Value Delta and Inpatient Utilization Ratio in the Education Group of Private and Government Hospital in 2013 and 2015

Value	Government hospital			Private hospital		
	<=SD	SMP-SMA	Diploma-PT	<=SD	SMP-SMA	Diploma-PT
Delta	0.62	0.47	0.43	0.65	0.52	0.33
Rasio	64%	49%	34%	95%	62%	20%

Based on the percentage parameter, delta values, and the ratio by educational level can be concluded that the program is used by the entire group JKN education both higher education and lower education to health services at government hospitals and private hospitals. This indicates that the dissemination and understanding of the program JKN especially at low education group (<= SD) has been successfully achieved. Through this open access, JKN can raise equity for all people, especially those with low literacy groups.

Some studies show that the rate of utilization of health services in the group of uneducated is always lower than the highly educated group. Studies conducted in 31 developing countries (21 of them conducted in Africa) shows that the utilization of medical personnel during delivery five times higher in women with educational background of junior high school graduates compared with women who did not graduate from junior high school [21], In addition to the utilization of health care during birth, level of education is also a most excellent measuring tool to see the level of utilization of antenatal care (ANC). Women with a higher education level more regularly in a visit which is recommended for the ANC and have high levels of punctuality that early on the first visit ANC than women with lower levels of education. In much of the literature, the level of education is often associated with the level of income and expenses for health care consumption [19]. In some developing countries, the relationship level of knowledge in the family is directly proportional to the level of utilization of health services used. Awoyemi and his colleagues [22] explained that in general, the level of education, income, and health has a positive correlation with the utilization of modern health care. A person with a high level of education can get higher revenue opportunities as well. This leads to higher income groups are more able to reach the cost of quality medical services [22]. Studies conducted in Kenya showed that low maternal education

levels lead to a visit early in pregnancy were low anyway, especially in the first trimester. Low education levels are often associated with early marriage age makes access to health services depends on the family's decision [23]. The different results obtained in developed countries such as the study conducted by Cooper, et.al. In these studies found a causal relationship between low income levels with low educational levels have an impact on the level of consumption is higher in health care as it did in the State of California, United States [19].If the terms of the determinants of provider-user, the availability of quality health care services cannot be used efficiently if it is not supported by the ability of users to seek information actively. The individual's ability to process information about health services is influenced by the level of literacy factor, and knowledge of the health of each individual [24]. Awareness about certain diseases and the benefits of certain health care is the main condition in determining the amount of demand for services.

In the terms of the determinants of provider-user, the availability of quality health care services cannot be used efficiently if it is not supported by the ability of users to seek information actively. The individual's ability to process information about health services is influenced by the level of literacy factor, and knowledge of the health of each individual [24]. Awareness about certain diseases and the benefits of certain health care is the main condition in determining the amount of demand for services. If a disease is not identified, then the disease care coverage will be low, so the health outcome for the disease gets worse. A person with a low level of education will have a low awareness in maintaining their health [25]. The level of education contributes to the processing of information received by a person and how that person will respond in a particular form of behavior included in the utilization of health services [26]. Socioeconomic background studies such as education level known to be associated closely with the level of service utilization materiality.. Several studies in developing countries indicate that the level of education achieved by a mother along with social status, level of household welfare, and decision makers in the household are intimately associated with health behavior mother during pregnancy that eventually will be having an effect on the level of safety of mother [21]. In addition to maternal and child health, political commitment to equity of education and health services are known to increase the utilization of health services and better health status. There are several reasons why health-related education. One reason that is often used is the link between education and employment options that will affect the level of income, but this relationship is only a fraction of the influence of education. The relationship between education and health, especially present in different patterns of thinking and decision-making in health habits of every person. Thus, referring to the results of our study, it is known that through the program JKN, disparities in utilization because the educational background of the foregoing can be tackled [7, 27].

5. Conclusion

Based on the analysis of parameters of percentage, the value of delta, ratio, and odds ratios of the four groups of variables: the ownership of health insurance, geographic (rural and urban), consumption expenditure per capita, and educational level showed that there was an increase in equity, the rate of utilization and increased access to health services in all groups studied. The increase in equity, the rate of utilization and improved access are highest in JKN card owner group, group of rural, low-income groups, low education and community groups.

The results of this study showed that the increase of equity ownership JKN card in utility hospitalization

especially at the Government Hospital. Their JKN also increase the equity of rural communities compared with urban communities in accessing inpatient care at government hospitals and private hospitals. Group of the lowest per capita spending also gained higher equity improvement compared with the rich. Implementation of JKN also includes all public high education and low access to inpatient services, the highest increase in equitymainly in the low education group.

Nevertheless, there are a number of challenges that need active support from relevant stakeholders. First, there needs to be an effort to improve equity, especially in terms of improving the coverage, especially in integrating participants Jamkesda and increased membership of participants PBPU. Secondly, the need for support in dissemination and accessibility of the program JKN needed in rural communities to health facilities. Third, technical issues need to be addressed, especially for the poor as the most vulnerable group to the risk, example by addressing the problem of JKN distribution card immediately. Fourth, improve patient satisfaction with inpatient care either in government hospitals, private hospitals, as well as from service JKN.

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